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Vertelney et al.

[45] **Date of Patent:** Apr. 13, 1993[54] **USER INTERFACE SYSTEM HAVING  
PROGRAMMABLE USER INTERFACE  
ELEMENTS**

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161

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[57] **ABSTRACT**

A user interface element having a plurality of user interface elements for marking, finding, organizing, and processing data within documents stored in an associated computer system are described. Each element typically has an appearance which is uniquely related to the data or the function the element is designed to represent or perform, respectively. In their simplest form, these elements are only used to mark data within a document. Each element, however, can also be programmed to cause the computer to perform some function in association with the marked data, such as printing the data or mailing the data to someone. A user can select particular data within a document using an element and have that data associated with the element in memory. Data marked with common elements can be found by searching for a particular representative element in memory. Users can create their own elements, program elements with their own desired functionality, and modify existing elements. Elements can also be compounded together so as to cause a combination of tasks to be performed by simply activating one element.

**20 Claims, 27 Drawing Sheets**